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Working Party on the Construction of Vehicles

Working Party on Lighting and Light-Signalling (GRE)

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agenda item 2.2.)

PROPOSAL FOR DRAFT (COLLECTIVE) AMENDMENTS TO REGULATIONS Nos. 3, 4,
6, 7, 23, 38, 50, 77 and 91

3	(Retro-reflecting devices)
4	(Rear registration plate illumination)
6	(Direction indicators)
7	(Position, stop and end-outline marker lamps)
23	(Reversing lamps)
38	(Rear fog lamps)
50	(Position, stop, direction indicator lamps for motorcycles)
77	(Parking lamps)
87	(Daytime running lamps)
91	(Side-marker lamps)

Transmitted by the Expert from the Working Party "Brussels 1952" (GTB)

Note: The text reproduced below was prepared by the expert from GTB in order to allow the fitting of a device in different positions on different vehicle types. It was based on a document distributed without a symbol (informal document No. 8) during the forty-third session of GRE (TRANS/WP.29/GRE/43, para. 113).

Note: This document is distributed to the Experts on Lighting and Light Signalling only.

A. PROPOSAL

(a) Regulation No. 3 (Retro-reflectors)

Paragraph 3.1., amend to read:

"3.1. The application for approval shall be submitted by the holder of the trade name or mark, or if necessary by his duly accredited representative.

At the choice of the applicant, it will specify that the device may be installed on a vehicle with different inclinations of the reference axis in respect to the vehicle reference planes and to the ground or, in the case of Class IA and IVA retro-reflectors, rotate around its reference axis; these different conditions of installation shall be indicated in the communication form. It shall be accompanied by:"

Paragraph 3.1.1., amend to read:

"..... geometrically the position(s) in which the retro-reflecting device may be fitted to the vehicle. The drawings must show"

Annex 2, item 9., amend to read:

"9. Concise description:

In isolation/part of an assembly of devices: 2/

Colour of light emitted: white/red/amber: 2/

Geometric conditions of installation and relating variations, if any:"

Annex 7, paragraph 1., amend to read:

"1. When applying for approval, the applicant shall specify one or more or a range of axis of reference, corresponding to the illumination angle $V = H = 0^\circ$ in the table of coefficients of luminous intensity (CIL).

In the case where more than one or a range of different axis of reference are specified by the manufacturer, the photometric measurements shall be repeated making reference each time to a different axis of reference or to the extreme axis of reference of the range specified by the manufacturer."

(b) Regulation No. 4 (Rear registration plate illumination)

Paragraph 2., amend to read:

"..... or forestry tractors (120 x 165 mm) or any combination of those plates. At the choice of the applicant, it will also specify that the device may be fitted in more than one or a field of positions in relation to the space to be occupied by the registration plate; these different positions shall be indicated by the applicant in the communication form. It shall be accompanied by the following,"

Paragraph 7., amend to read:

"7. Incidence of the light

The manufacturer of the illuminating device shall specify one or more or a field of positions in which the device is to be fitted in relation to the space for the registration plate; when the lamp is placed in the position(s) specified by the manufacturer the angle of incidence of the light on the surface of the plate shall not exceed 82° at any point of"

Annex 2, item 9., amend to read:

"9. Concise description: 3/

Device for illuminating: a tall plate
a wide plate
a plate for agricultural or forestry tractor 2/

Number and category of filament lamp(s):

Geometrical conditions of installation (position(s) and inclination(s) of the device in relation to the space to be occupied by the registration plate and/or different inclinations of this space):"

(c) Regulation No. 6 (Direction indicator lamps)

Paragraph 2.1., amend to read:

"..... of two lamps of the same category. At the choice of the applicant, it will also specify that the device may be installed on the vehicle with different inclinations of the reference axis in respect to the vehicle reference planes and to the ground or rotate around its reference axis; these different conditions of installation shall be indicated in the communication form."

Paragraph 2.2.1., amend to read:

"..... geometrically in what position(s) the direction indicator may be mounted on the vehicle; the axis of"

Annex 2, item 9., amend to read:

"9. Concise description: 3/
Category: 1, 1a, 1b, 2a, 2b, 3, 4, 5, 6. 2/
Number and category of filament lamp(s):
Geometrical conditions of installation and relating variations, if any:"

Annex 4, add a new paragraph 1.3., to read:

"1.3. In the case where the device may be installed on the vehicle in more than one or in a field of different positions the photometric measurements shall be repeated for each position or for the extreme positions of the field of the reference axis specified by the manufacturer."

(d) Regulation No. 7 (Front and rear position lamps, end outline marker lamps, stop lamps)

Add a new paragraph 2.1.4., to read:

"2.1.4. At the choice of the applicant, that the device may be installed on the vehicle with different inclinations of the reference axis in respect to the vehicle reference planes and to the ground or rotate around its reference axis; these different conditions of installation shall be indicated in the communication form."

Paragraph 2.2.1., amend to read:

"..... geometrical position(s) the device may be mounted on the vehicle; the axis of observation"

Annex 2, item 9., amend to read:

"9. Concise description: 3/
By category of lamps:
Colour of light emitted: red/selective yellow/white 2/
Number and category of filament lamp(s):"
Geometrical conditions of installation and relating variations, if any:"

Annex 4, add a new paragraph 1.3., to read.

"1.3. In the case where the device may be installed on the vehicle in more than one or in a field of different positions the photometric measurements shall be repeated for each position or for the extreme positions in the field of the reference axis specified by the manufacturer."

(e) Regulation No. 23 (Reversing lamps)

Paragraph 2.1., amend to read:

"2.1. The application for approval shall be submitted by the holder of the trade name or mark, or by his duly accredited representative.

At the choice of the applicant, it will specify that the device may be installed on the vehicle with different inclinations of the reference axis in respect to the vehicle reference planes and to the ground or rotate around its reference axis; these different conditions of installation shall be indicated in the communication form."

Paragraph 2.2.1., amend to read:

..... in what geometrical position(s) the reversing lamp may be mounted on the vehicle; the axis of observation"

Annex 1, item 9., amend to read:

"9. Concise description:

Number and category of filament lamp(s):

Geometrical conditions of installation and relating variations; if any:

Annex 3, add a new paragraph 1.3., to read:

"1.3. In the case where the device may be installed on the vehicle in more than one or in a field of different positions the photometric measurements shall be repeated for each position or for the extreme positions in the field of the reference axis specified by the manufacturer.

(f) Regulation No. 38 (Rear fog lamps)

Paragraph 2.1., amend to read:

"2.1. The application for approval shall be submitted by the holder of the trade name or mark or by his duly accredited representative.

At the choice of the applicant, it will specify that the device may be installed on the vehicle with different inclinations of the reference axis in respect to the vehicle reference planes and to the ground or rotate around its reference axis; these different conditions of installation shall be indicated in the communication form."

Paragraph 2.2.1., amend to read:

"..... and showing geometrically the position(s) in which the rear fog lamp may be fitted to the vehicle; the axis of"

Annex 1, item 9., amend to read:

"9. Concise description: 3/

Category: 1, 1a, 1b, 2a, 2b, 3, 4, 5, 6. 2/

Number and type(s) of lamp(s):

Geometrical conditions of installation and relating variations; if any:"

Annex 3.

Insert a new paragraph 3., to read:

"3. In the case where the device may be installed on the vehicle in more than one or in a field of different positions the photometric measurements shall be repeated for each position or for the extreme positions of the field of the reference axis specified by the manufacturer."

Paragraphs 3 and 4 (former), renumber as paragraphs 4 and 5.

(g) Regulation No. 50 (Position, stop, direction indicator lamps for motorcycles)

Insert a new paragraph 3.1.4., to read:

"3.1.4. At the choice of the applicant, that the device may be installed on the vehicle with different inclinations of the reference axis in respect to the vehicle reference planes and to the ground or rotate around its reference axis or, in the case of a rear registration plate lamp, that the device may be fitted in more than one or a field of positions in relation to

the space to be occupied by the registration plate; these different conditions of installation (or different positions) shall be indicated in the communication form."

Paragraph 3.2.1., amend to read:

"..... geometrical position(s) the device may be mounted on the vehicle; the axis of observation to be taken as the axis of reference in the tests (horizontal angle $H = 0^\circ$, vertical angle $V = 0^\circ$) and the point to be taken as the centre of reference in the said tests; the drawings shall show the position intended for the approval mark and eventually the additional symbols in relation to the circle of the approval mark;"

Annex 2, item 9., amend to read:

"9. Concise description: 3/

By category of lamp:

Colour of light emitted: red/selective yellow/white/amber 2/

Number and category of filament lamp(s):

Geometrical conditions of installation and relating variations, if any:"

Annex 4, add a new paragraph 1.3., to read:

"1.3. In the case where the device may be installed on the vehicle in more than one or in a field of different positions the photometric measurements shall be repeated for each position or for the extreme positions in the field of the reference axis specified by the manufacturer.

Annex 6, paragraph 3., amend to read:

"3. Angle of incidence

The manufacturer of the illuminating device shall specify one or more or a field of positions in which the device is to be fitted in relation to the space for the registration plate; when the lamp is placed in the position(s) specified by the manufacturer the angle of incidence of the light on the surface of the plate does not exceed 82° at any point of the surface to be illuminated, this angle being measured from the extremity of the illuminating area of the device which is furthest from the surface of the plate. If there is more than one illuminating device, the foregoing requirement shall apply only to the part of the plate intended to be illuminated by the device concerned.

The device shall be so designed that no light is emitted directly towards the rear, with the exception of red light if the device is combined or grouped with a rear lamp."

(h) Regulation No. 77 (Parking lamps)

Paragraph 3.1., amend to read:

"3.1. The application for approval shall be submitted by the holder of the trade name or mark or by his duly accredited representative.

At the choice of the applicant, it will specify that the device may be installed on the vehicle with different inclinations of the reference axis in respect to the vehicle reference planes and to the ground or rotate around its reference axis; these different conditions of installation shall be indicated in the communication form."

Paragraph 3.2.2., amend to read:

"..... and showing geometrically the position(s) in which the lamp may be mounted on the vehicle; the axis of observation"

Annex 1, insert a new item 11., to read:

"11. Concise description:

Geometric conditions of installation and relating variations, if any:"

Items 11. to 15. (former), renumber as items 12. to 16.

Annex 4, add a new paragraph 1.3., to read:

"1.3. In the case where the device may be installed on the vehicle in more than one or in a field of different positions the photometric measurements shall be repeated for each position or for the extreme positions of the field of the reference axis specified by the manufacturer."

(i) Regulation No. 91 (Side-marker lamps)

Paragraph 3.1., amend to read:

"3.1. The application for approval shall be submitted by the holder of the trade name or mark or by his duly accredited representative.

At the choice of the applicant, it will specify that the device may be installed on the vehicle with different inclinations of the reference axis in respect to the vehicle reference planes

and to the ground or rotate around its reference axis; these different conditions of installation shall be indicated in the communication form. It shall specify:

Paragraph 3.2.1., amend to read:

"..... geometrically in what position(s) it may be mounted on the vehicle; the axis of observation"

Annex 2, item 9., amend to read:

"9. Concise description: 3/

Colour of light emitted: amber/red 2/

Number and category of filament lamp(s):

Geometrical conditions of installation and relating variations, if any:"

Annex 4, paragraph 1.3., renumber as paragraph 1.4. and insert a new paragraph 1.3. to read:

"1.3. In the case where the device may be installed on the vehicle in more than one or in a field of different positions the photometric measurements shall be repeated for each position or for the extreme positions of the field of the reference axis specified by the manufacturer."

* * *

B. JUSTIFICATION

Even though modern cars have normal lighting and light-signalling devices with external shape specific for each mode, some devices have "standardized" shapes.

These devices are mainly used on commercial vehicles, trailers, two-wheeled vehicles but the possibility to use the same lamp on different types/versions of vehicle exists for passenger cars too.

In some cases the same device is mounted on different types/versions of vehicles rotating it around its reference axis or varying its inclination with respect to the ground to adapt it to the body shape.

For each different application the approval of the device shall be extended to assure the prescribed performances of the lamp in the new position of installation.

This procedure, in addition to reducing the global time and cost of the device approval for the lamp manufacturer, will simplify the task of the vehicle manufacturer who will know from the starting of the project of a new vehicle which existing and type approved lamps are available and their different approved positioning on the vehicle.

The specific proposals for the amendment to the various ECE Regulations based on the principle explained above were examined and agreed by the GTB Photometry Group.

Therefore, the proposals for amendments to ECE Regulations Nos. 3, 4, 6, 7, 23, 38, 50, 77 and 91 for the introduction of the approval of a "field of application" of the device, are suggested.

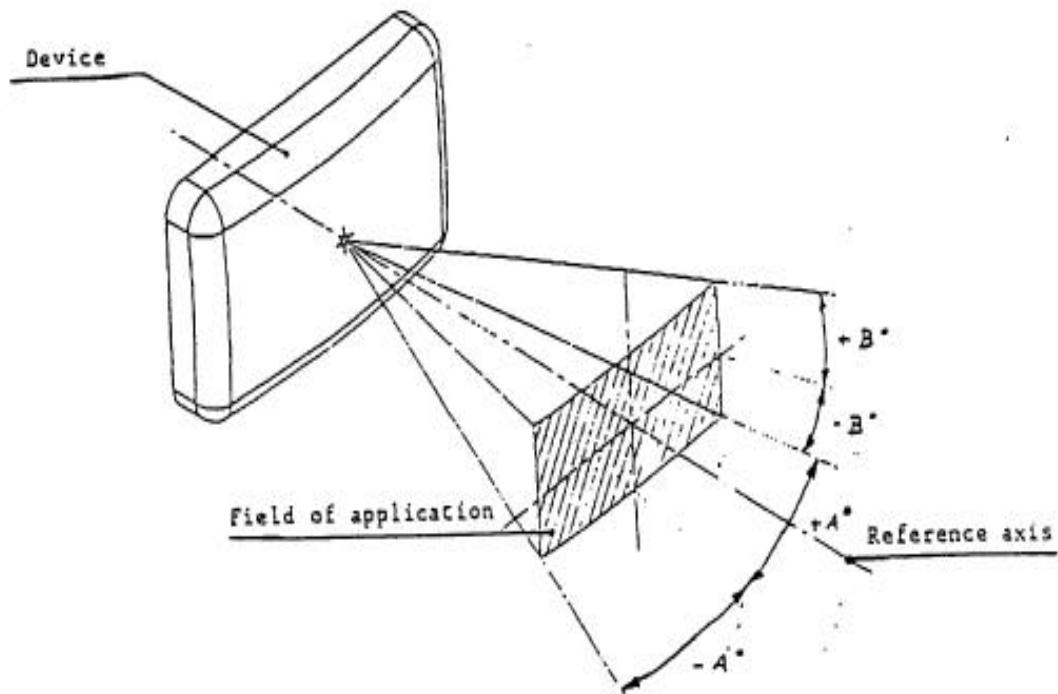
Three explanatory sketches are also attached; the first refers to the rear registration plate lamp and the remaining two to the other lamps and retro-reflectors.

On the drawings, in perspective, are indicated the possible variations of the installation conditions to be taken into account for the type approval of a "field of application".

Explanatory sketch No. 1

The following sketch shows the possible variable parameters of the geometric conditions of installation for the front and rear lamps and retro-reflectors to be taken into account in the case where an approval for a "field of application" of a device is required by the lamp manufacturer.

On the basis of the lamp manufacturer indications, one or more of these parameters are provided for, in the more suitable way, in the approval documents to define the "field of application" for the device submitted for approval.

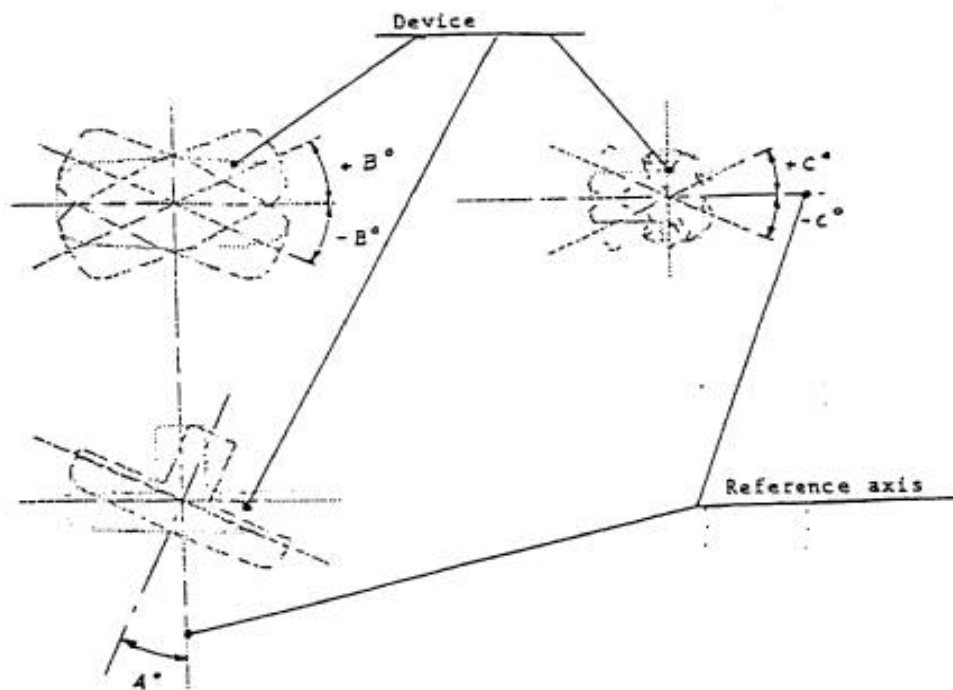


Note: In the above sketch the angles are identified with latin characters to avoid any confusion with the standardized identification of the visibility angles.

Explanatory sketch No. 2

The following sketch shows the possible variable parameters of the geometric conditions of installation for the side mounted lamps and retro reflectors to be taken into account in the case where an approval for a "field of application" of a device is required by the lamp manufacturer.

On the basis of the lamp manufacturer indications, one or more of these parameters are provided for, in the more suitable way, in the approval documents to define the "field of application" for the device submitted for approval.

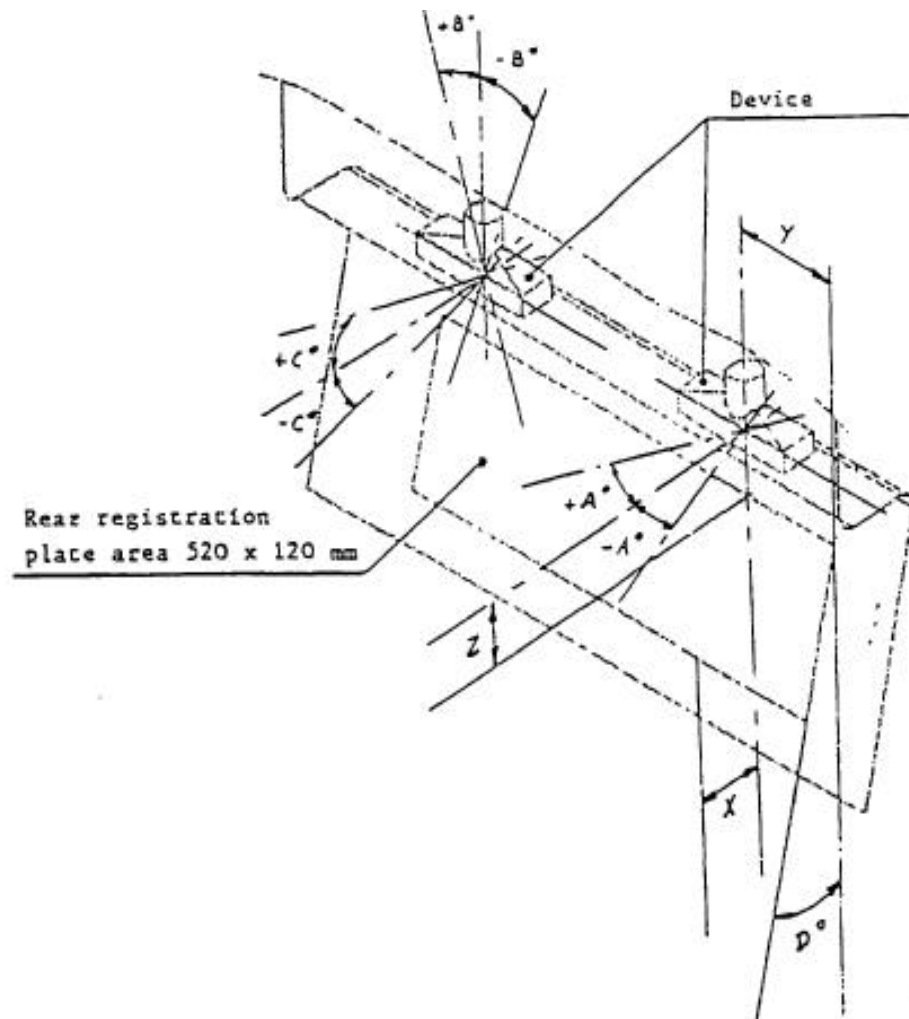


Note: In the above sketch the angles are identified with latin characters to avoid any confusion with the standardized identification of the visibility angles.

Explanatory sketch No. 3

The following sketch shows the possible variable parameters of the geometric conditions of installation for the rear registration plate lamp to be taken into account in the case where an approval for a "field of application" of a device is required by the lamp manufacturer.

On the basis of the lamp manufacturer indications, one or more of these parameters are provided for, in the more suitable way, in the approval documents to define the "field of application" for the device submitted for approval.



Note: In the above sketch the angles are identified with latin characters to avoid any confusion with the standardized identification of the visibility angles.
